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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/688,939	10/16/2000	William Davenport	07442-022001	9958

26161 7590 09/10/2004

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EXAMINER	
ONUAKU, CHRISTOPHER O	

ART UNIT	PAPER NUMBER
2616	5

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/688,939	DAVENPORT, WILLIAM	
	Examiner	Art Unit	
	Christopher O. Onuaku	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-21* is/are allowed.

6)☒ Claim(s) *22-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2&3*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by McLaren (US 6,122,433).

Regarding claim 22, McLaren discloses digital video recording, including the derivation, recording and reproduction of MPEG like advanced television signals at non-standard speeds, comprising the method of obtaining, from digital video data, first data representative of an image, generating, on the basis of the first data, second data for trick-mode display of the image, the second data being modified for delivery at a delivery interval within a specified range of intervals (see col.3, line 5 to col.5, line 22), here the original data stream is the "first" data and the trick-play data stream reads on the "second" data that has been modified by extracting independent intra-information

pieces from the original data stream, and furthermore, the low spatial resolution "Trick-play" data stream indicates reduced delivery time.

Regarding claim 23, McLaren discloses the method comprising writing a trick-play mode file to a mass-storage subsystem, the trick-mode file including the second data (see I-frame memory 110 of Fig.1; col.5, line 55 to col.5, line 7), here examiner reads the trick-play I-frame memory as a mass storage subsystem and the reduced resolution I-frame which is utilized in the generation of speed specific data streams for each trick-play speed.

Regarding claim 24, McLaren discloses the method wherein generating the second data comprises adjusting an amount of the first data such data the amount falls within a selected range of amounts, the specified range of amounts being selected on the basis of the specified range of delivery intervals (see col.4, lines 23-55).

3. Claims 25&27 are rejected under 35 U.S.C. 102(e) as being anticipated by Eerenberg et al (US 6,621,979)

Regarding claim 25, Eerenberg et al disclose an apparatus for recording a digital video information signal and a corresponding trick play signal onto a record carrier, the digital video information signal being meant for a reproduction from the record carrier at a trick play speed m times the normal reproduction speed, m being an integer larger than 1, comprising the method of detecting an instruction to transition from normal mode

display of digital video data to trick-mode display, in response to the instruction, serving trick-mode data corresponding to the digital video data (see col.6, line 15 to col.7, line 63).

Regarding claim 27, Eerenberg et al disclose wherein serving trick-mode data comprises retrieving the trick-mode data from a trick-mode file (see col.col.4, line 62 to col.4, line 60).

4. Claims 29,30&31 are rejected under 35 U.S.C. 102(e) as being anticipated by Zdepski et al (US 6,445,738).

Regarding claim 29, Zdepski et al disclose video-on-demand systems and video compression, including a system and method for creating compressed fast forward and fast reverse video bitstreams from a normal play compressed video bitstream, comprising:

a) a video server for delivery of video content (see Fig.1); and

b) a mass-storage subsystem in communication with the video server, the mass storage subsystem including a first data set for serving the video content in normal mode and a second data set for serving the video content in trick-mode (see Fig.1; storage unit 62 and filter 102 of Fig.2; col.6, line 6 to col.8, line 22).

Regarding claim 30, Zdepski et al disclose an index file for correlating the first data set with the second data set, thereby enabling the video server to locate data on

the second data set that corresponds to selected data from the first data set (see Fig.2; filter 102 which extracts and stores I-frames and sequence headers, as well as all weighting matrices from the MPEG bitstream and stores this information in a new file; col.7, lines 30-41; col.9, line 15 to col.10, line 13).

Regarding claim 31, the claimed limitations of claim 31 are accommodated in the discussions of claim 29 above, except the claimed computer readable medium (see FIG.2; COL.2, line 7, to col.9, line 13), here Zdepski discloses wherein each of the operations of Fig.2 may be performed in either hardware or software, and the normal play bitstream is a bitstream of video data which is used to present a video sequence, such as a television segment or movie, onto a screen such a computer system. Furthermore, the frame of the normal bitstream reads on the 'first' data representative of an image and trick play image reads on the "second' data being modified for delivery (a particular trick play display mode, for example, fast forward of reverse trick play) at a delivery interval within a specified range of delivery intervals (different trick play display modes. Inherently a computer system includes a display means for displaying images or trick mode, for example.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 26&28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eerenberg et al in view of Comer (US 6,201,927).

Regarding claim 26, Eerenberg et al fail to explicitly disclose the method of detecting an instruction to transition from trick-play display of digital video data to normal mode display of the digital video data, and in response to the instruction, serving normal mode data corresponding to the digital video data. Comer teaches MPEG encoded signal decoding, including the reproduction and decoding of such signals from a medium in a reverse direction, wherein in Fig.1B, play back in a forward direction at normal play speed is illustrated. And at time t0, a reverse three times speed, mode trick play mode is selected at time t0 where I-frame is decoded and displayed (see col.2, lines 53-63). Here Comer teaches the principle of transitioning from normal play mode to trick play mode. It would have been obvious to apply similar principle to transition from trick play mode to normal play mode, in order, for example, to return the trick-play data to normal for normal display of data.

It would have been obvious to modify Eerenberg by adding the transition principle of Comer to the Eerenberg system in order that the Eerenberg system can transition, for example, from the trick-play mode to normal mode for normal display of data.

Regarding claim 28, Eerenberg et al disclose the method wherein serving normal mode data comprises retrieving the normal mode data from a normal mode file (see col.4, line 62 to col.5, line 9).

Allowable Subject Matter

7. Claims 1-21 are allowable over the prior art of record.

8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1, the invention relates to processing digital video, including the display of digital video files in fast-forward or rewind mode.

The closest reference McLaren (US 6,122,433) discloses digital video recording, including the derivation, recording and reproduction of MPEG like advanced television signals at non-standard speeds.

However, McLaren fails to explicitly disclose a method for processing digital video data for trick-mode display, the digital video data having an ordered sequence of frames, where the method comprises specifying a range of delivery intervals, generating a modified frame for trick-mode display of the selected frame, the modified frame including data representative of the selected image and being modified for delivery at a delivery interval within the range of delivery intervals.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Duruoz et al (US 6,654,539) teach management of trick playback of digital video.

Gordon et al (US 6,389,218) teach video-on-demand systems, including a method and apparatus for simultaneously generating compressed play and trick play bitstreams from a video frame sequence.

Lane et al (US 5,377,051) teach video receivers, including video receivers that are capable of receiving commands and/or detecting trick play modes of recorder operation and performing, e.g., error concealment operations in response to the received commands or detected mode of trick play recorder operation.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher O. Onuaku whose telephone number is (703) 308-7555. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Acting supervisor, Thai Tran, can be reached on 703-305-4725. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

COO
9/3/04

THAI TRAN
PRIMARY EXAMINER